TO: Director, National Institute for Occupational Safety and Health

FROM: California Fatality Assessment and Control Evaluation (FACE) Program

SUBJECT: Delivery Truck Driver Dies after being Crushed by a Truck while Making a Delivery to a Local Market in California

SUMMARY
California FACE Report #94CA007
April 26, 1995

On March 11, 1994, a 46-year-old black, non-Hispanic male truck driver (the decedent) died after being crushed by his delivery truck two days prior to his death. The decedent was in the process of unloading the truck for his employer, a liquor and spirits wholesale distributor, when the incident occurred. There were no witnesses to the incident. The victim had parked the truck, designed with an air-activated braking system, in a parking lot about 25-30 feet from the back of the market building where he was making a delivery. The truck was parked on a slight incline with its rear door facing the back door of the market. The victim was found pinned between the truck's bumper and a building drainpipe. The parking brake had not been secured, allowing the truck to roll backwards and pin the victim between the truck's bumper and the building drainpipe. Employees from the store called 911 and the victim was taken to a local hospital where he remained for the next two days. His condition gradually deteriorated and he died from massive internal injuries. The CA/FACE investigator concluded that in order to prevent similar future occurrences:

· employers should provide delivery drivers with some form of roll prevention device ("chock") such as wooden blocks, provide employee training in how to safely use them, and require their use behind rear tires to prevent trucks from rolling backwards when parked.

In addition, manufacturers and equipment designers should:

· equip commercial vehicles used by delivery drivers with an automatic alarm system that is activated when the emergency brake has not been set.

INTRODUCTION

On March 9, 1994, a 46-year-old male delivery truck driver was crushed by his delivery truck while making a delivery to a local market. The CA/FACE investigator was informed of this incident by a California Occupational Safety and Health Administration (Cal/OSHA) safety

engineer on March 24, 1994. A site visit and employer interview was conducted by the CA/FACE investigator and a Cal/OSHA safety engineer on April 4, 1994. Photographs of the incident site were also taken at that time. A copy of the Cal/OSHA Report and the Coroner's Autopsy Report were obtained by the CA/FACE investigator.

The decedent had worked for his employer for three and one-half years. The employer had been in business for over 100 years and had delivered products to this location for the past 40 years. The employer had 1,500 employees with approximately 350 working in the Los Angeles (LA) metropolitan area. There were approximately 30 employees with the same job description as the decedent in the LA metropolitan area. A safety officer was on staff and written safety rules were available for all driver tasks. At the time of the incident, the victim was not wearing nor was he required by his employer to wear any personal protective equipment (PPE).

INVESTIGATION

The employer in this incident was a wholesale liquor and spirits distributor. The decedent worked as a delivery truck driver. According to his employer, he had been to the incident site on prior occasions. The employer stated that all delivery truck drivers were given safety training and tested (both written and road) before being allowed to drive a delivery truck. This training included a test given by the Department of Transportation (DOT). The employer also stated that employees were given several types of safety training including on-the-job training, manuals, videos, and monthly safety meetings.

On the day of the incident, the victim backed his delivery truck to within 25-30 feet from the rear entrance of the market. The truck, designed with an air-activated braking system, was parked on a slight incline down to the entrance of the market. The victim apparently got out of the truck and opened the back doors of the van. There were no witnesses to this sequence of events, but the employer assumed this to be the case based on the position of the victim when he was found by market employees. At some time after the victim opened the back doors of the truck, the truck rolled back and crushed him between the back bumper of the truck and a building drainpipe. According to fire department personnel, the parking brake had not been set.

Employees from the market called 911 and the victim was transported to a local hospital where an exploratory laparotomy was performed. The victim was found to have massive pelvic fractures, a large pelvic hematoma and bladder injuries. The victim remained in the hospital for 2 days. His condition gradually deteriorated and he died at 12:00 p.m. on March 11, 1994.

CAUSE OF DEATH

The Certificate of Death lists the cause of death as multiple organ system failure due to hemorrhagic shock, massive pelvic fractures and blunt force trauma.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Employers should provide some form of roll prevention device ("chock") such as wooden blocks to delivery drivers, provide employee training in how to

safely use them, and require their use behind rear tires of the delivery trucks to prevent them from rolling backwards while parked.

Discussion: This incident may have been prevented if the decedent had been required to place a roll prevention device behind the rear tires of his delivery truck. By doing so, the truck would have been prevented from rolling backwards and crushing him. By providing training to employees, employers encourage all workers to actively participate in workplace safety. Increased worker participation aids in the prevention of occupational injury.

Recommendation #2: Manufacturers and equipment designers should equip commercial vehicles used by delivery drivers with an automatic alarm system that is activated when the emergency brake has not been engaged.
Discussion: Incidents such as this one could have been prevented if commercial vehicles were designed with an automatic alarm system that activates when an emergency brake has not been engaged. Although such a prevention measure would ultimately require human behavior to correct the situation, installation of this kind of system would be less costly than a more complicated engineering solution such as automatic emergency brake engagement.

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ADDENDUM

12/31/97

This addendum serves to clarify two points in the recommendations and to correct an error in the event description using information received after the report was initially published.

The victim was making a delivery to a private club, not a market.

Chocks should be placed in front as well as behind wheels to prevent movement in either

direction.

Parking brakes should be engaged whenever a vehicle is stopped. Employers can help ensure this becomes automatic behavior for employees through education, training, and progressive disciplinary measures.

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FATALITY ASSESSMENT AND CONTROL EVALUATION PROGRAM

The California Department of Health Services, in cooperation with the Public Health Institute and the National Institute for Occupational Safety and Health (NIOSH), conducts investigations of work-related fatalities. The goal of this program, known as the California Fatality Assessment and Control Evaluation (CA/FACE), is to prevent fatal work injuries in the future. CA/FACE aims to achieve this goal by studying the work environment, the worker, the task the worker was performing, the tools the worker was using, the energy exchange resulting in fatal injury, and the role of management in controlling how these factors interact. NIOSH-funded, state-based FACE programs include: Alaska, California, Iowa, Kentucky, Massachusetts, Michigan, Minnesota, Nebraska, New Jersey, New York, Oklahoma, Oregon, Washington, West Virginia, and Wisconsin.

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Additional information regarding the CA/FACE program is available from:

California FACE Program
California Department of Health Services
Occupational Health Branch
850 Marina Bay Parkway, Building P, 3rd Floor
Richmond, CA 94804